

OKLAHOMA HEARING SCREENING PROTOCOL FOR THE PEDIATRIC POPULATION - AGES BIRTH TO 3 YEARS

Screening and Special Services
Oklahoma State Department of Health
1000 NE 10th Street
Oklahoma City, OK 73117-1299
405-271-6617
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Preface

The following recommended protocols were developed by the Oklahoma Audiology Taskforce (OKAT) in collaboration with the following programs from the Oklahoma State Department of Health (OSDH): Oklahoma Newborn Hearing Screening Program (NHSP), Oklahoma Pediatric Audiology Program, SoonerStart Part C Early Intervention, and the Child Guidance Program. These guidelines were created in accordance with recommendations made by the American Academy of Audiology (AAA) and the American Speech-Language-Hearing Association (ASHA). The protocols take into consideration other national organizations such as the Food and Drug Administration (FDA), the Center for Disease Control (CDC), Early Hearing Detection and Intervention (EHDI) Program, and the Joint Committee of Infant Hearing (JCIH). Please reference those materials for further reading.

A special thank you goes to members of the OKAT Protocols Subcommittee who developed this document. Along with expanding previous state protocols, the subcommittee disseminated a statewide survey to determine hearing screening needs of clinicians serving the birth to three population. Survey results indicated that clinicians would like additional resources such as genetic information, an audiology referral form, tip sheets, and parent template letters, which can be modified to meet the needs of any program.

If you have additional questions for the OKAT Protocols Subcommittee or would like an electronic copy of parent letters for modification, please email newbornscreen@health.ok.gov.

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I. Introduction

It is important to identify hearing loss early and provide timely intervention for very young children and their families. Childhood hearing loss has a devastating impact on speech and language skills. Hearing loss can have harmful effects on social, emotional, cognitive, and academic development and subsequently, on the individual's vocational and economic potential.

According to the Centers for Disease Control and Prevention (CDC), each year, 12,000 infants are born deaf or hard of hearing (DHH). The prevalence of hearing loss rises in older infants and toddlers if mild conductive hearing losses associated with otitis media with effusion are included in these estimates. There is also a population of children that pass the initial newborn hearing screening but have a risk factor for delayed onset hearing loss that will subsequently develop a significant hearing loss.

Research shows that children with hearing loss who receive early identification and intervention before 6 months of age can have language development that is comparable to same-aged peers (Yoshinaga-Itano et al., 1998; Bubbico et al., 2007; Ching, T.Y.C., 2015). Oklahoma originally enacted legislation in 1982, which was updated in 2000, requiring that every newborn have hearing screened prior to discharge from the birthing hospital.

The Oklahoma Newborn Hearing Screening Program and the Oklahoma Pediatric Audiology Program in collaboration with the Oklahoma Audiology Taskforce (OKAT) developed the following recommended protocols. The procedures in this document were written to be used as a training manual and resource for programs in Oklahoma providing hearing screenings to children under the age of 3. To ensure proper follow up for the targeted populations, Hearing Screeners should adhere closely to these procedures and make appropriate referrals to pediatric audiologists and/or physicians when children meet referral criteria. These guidelines were created in accordance with recommendations made by the Joint Committee on Infant Hearing (JCIH), American Academy of Audiology (AAA) and the American Speech-Language-Hearing Association (ASHA).

II. Accountability

It is strongly recommended that a single staff member be designated for tracking referrals. This staff member should monitor the program's guidelines for ensuring proper training of the screeners regarding technique, infection control, ensuring calibration of equipment, and monitoring quality assurance.

Hearing Screening programs must target the following areas for program management responsibilities:

- Accountability
- Risk management
- Program evaluation

Program management responsibilities include implementing a protocol to:

- Ensure patient confidentiality.
- Provide parental notification.
- Obtain parental consent when required.
- Determine what quantifies as a Pass or Refer (Not Pass).
- Monitor the overall programmatic Pass/Refer (Not Pass) rates.
- Develop and monitor follow-up protocols.
- Counsel caregiver(s) on follow-up actions.
- Make appropriate referrals for children needing diagnostic assessment.

Quality assurance activities need to be ongoing and should include but are not be limited to the following:

- Initial training by a pediatric audiologist or speech-language pathologist.
- Annual calibration of hearing equipment in compliance with national standards.
- Appropriate infection control recommendations should be followed (cf. Appendix A).
- Written documentation of results, equipment used, referrals, etc. (cf. Appendices B & C).
- Develop follow-up protocols for children who do not pass the hearing screening and the children with risk factors associated with hearing loss (cf. Appendices D & E).
- Track Refer (Not Pass) Rates at your location.
 - Over-referring can decrease physician concern, which can hinder follow-up services.
 - Most manufacturers indicate Average Refer (Not Pass) Rates of:
 - Automated Auditory Brainstem Response (AABR) – 2-4%
 - Otoacoustic Emissions (OAEs) – 8-12%
 - A national tool has been developed to assist programs in tracking hearing screenings and reviewing Refer (Not Pass) Rates:
<http://www.infanthearing.org/earlychildhood/tracking-tools.html>

Any program offering hearing screenings should have a referral plan in place for children who do not pass. Prior to implementing the program, screening personnel should research pediatric audiology providers in the area. If you are in an area where there are a limited number of pediatric audiologists, consider reaching out to those provider(s) ahead of time to let them know you are conducting a screening program. It is important to make sure you are referring to a pediatric audiologist with the proper equipment (i.e. Immittance, OAE and ABR) and training to conduct follow-up pediatric diagnostic evaluations. You can contact the **Oklahoma Pediatric Audiology Program** or the **Oklahoma Newborn Hearing Screening Program (NHSP)** for any assistance in locating a pediatric audiologist in your area at 405-271-6617, 1-800-766-2223 or email questions to newbornscreen@health.ok.gov

Two useful tools in locating pediatric audiologists are as follows:

- A Professionals Guide to Pediatric Audiologists in Oklahoma
<https://www.ok.gov/health2/documents/A%20Professionals%20Guide%20to%20Pediatric%20Audiologists%20in%20Oklahoma.pdf>
- Early Hearing Detection & Intervention – Pediatric Audiology Links to Services (EHDI-PALS)
<http://www.ehdi-pals.org/>

When a child does not pass the screen, parents/caregivers should be directed to contact their child's primary care physician for a referral to a pediatric audiologist (cf. Appendix F). When calling to schedule a hearing appointment, parents should ask the facility to confirm the following: ages of children served, services provided, insurances accepted, payment options, and other related information, as details can change over time.

III. Personnel

Any organization or program providing services in the community to children under the age of 3 may offer hearing screenings. Individuals who have received training to develop and maintain appropriate skills can conduct hearing screenings. Training may be available from your local audiology partner, the vendor you purchased your device from, or Oklahoma State Department of Health. Questions regarding training and educational materials can be directed to the Oklahoma Newborn Hearing Screening Program at 405-271-6617, 1-800-766-2223 or email questions to newbornscreen@health.ok.gov

IV. Training

Training may be available from your local audiology partner and/or the vendor you purchased your device from.

NHSP also offers hearing and middle ear screening on a rolling calendar basis at OSDH Central Office, 1000 NE 10th Street, OKC, OK, room 704.

- If you are not an OSDH employee, contact the Oklahoma Newborn Hearing Screening Program at 405-271-6617, 1-800-766-2223 or email questions to newbornscreen@health.ok.gov, for information about training.
 - OSDH Employees can register for the training at <https://learn.ok.gov>.
 - If it is an OSDH employees first time to use the LEARN website, the log in will be the employees OSDH ID as your username and the default password is Welcome1.

V. Scheduling

- Follow your program's policies and procedures for scheduling hearing screenings.
- If a hearing screening is being scheduled by county health department staff, follow the triage processes below:
 - The family is referred to the clinician properly trained in physiologic hearing screening techniques.

- The clinician determines if a hearing concern is the only reason why the family is requesting service.
- If hearing is the only concern, the clinician schedules and then administers the appropriate hearing/middle ear screening.
- Clinician will then document the results according to policies and procedures.
- If the baby does not pass the hearing screening and is being seen through a program other than SoonerStart, initiate the referral to SoonerStart.

VI. Obtaining Newborn Hearing Screening Results

Hearing results can be obtained through the Newborn Screening Results Web Portal

- <https://nbsresults.health.ok.gov>
- Requires Facility Site Administrator
- To obtain access to NBSR contact:
 - Casey Hedrick- Oklahoma Public Health Laboratory
 - CaseyH@health.ok.gov or 271-5070 x57700

Hearing results can be obtained for a child who is in the OSDH System, PHOCIS.

- Find Child in PHOCIS
- Link to Mother
- Click PREVIEW on top bar
- Scroll to LAB
 - Select “Newborn Screening (NBS)”
 - You will find NBS and hearing results for child

VII. Population of Children to Screen

Screeners should follow their program’s protocol when determining which children should be screened.

Some examples of who to screen may include the following:

- Children who did not receive a hearing screening at birth.
- Children who did not pass a hearing screening at birth.
- Children who passed a hearing screening at birth but have a risk factor for the development of delayed-onset, or progressive Hearing Loss (cf. Appendix D).
- Children who have a family history of childhood hearing loss.
- Children for whom someone has expressed concern regarding hearing.
- Children who present with speech, language, or developmental delays.
- Children with a history of ear, nose, and throat problems.
- Children with a cleft lip and/or palate.
- Children who have a syndrome that is known to be linked with hearing loss (cf. Appendix E)

Some examples of who not to screen may include the following:

- Children with significant drainage from the ear.
- Children with significant ear malformations (i.e. microtia, atresia).
- Children who have already been diagnosed with a permanent hearing loss by a pediatric audiologist.

VIII. Screening Environments

The choice of the screening environment is very important. Screenings can be held in a variety of environments (i.e. home, daycare, school, clinic). It should be reasonably quiet with minimal distractions. Some things to consider may include:

- Choose an area away from stairs, windows, street noise, hall traffic, heating/cooling vents, bathrooms, or play areas.
- Care must be taken to ascertain that noise levels from cell phones, TVs, music, dishwashers, lawn mowers, or traffic do not affect screening outcomes.
- Family members (including pets) should keep noise to a minimum.

IX. Equipment Maintenance

Screening equipment must be calibrated annually. It is recommended you check with your program administrator as to the processes for equipment calibration. Some devices have pop-up reminders indicating when calibration should be completed. Older devices may not have this feature. Mechanisms for tracking may include writing the upcoming calibration date on the device and/or your calendar.

Prior to any screenings, ensure equipment is functioning properly and that the device is fully charged. It is recommended that equipment be transported carefully to avoid bumping or dropping. Do not expose the equipment to extreme heat or cold. To ensure optimal screenings, get to know your equipment (cf. Appendix G).

X. Best Practice Guidelines

Conventional hearing screening techniques (i.e. audiometry) are not ideal to use with children under the age of 3. The following three physiologic screening tools are recommended to be used for screening children birth through 3 years:

- Automated Auditory Brainstem Response (AABR) Screening
- Otoacoustic Emissions (OAEs) Screening
- Tympanometry Screening

Prior to **any** appointment:

1. Complete training and become familiar with hearing equipment.
 - Refer to User's manual for detailed use of the equipment.
2. Calibrate your equipment annually. If the device is not calibrated on schedule:
 - Some devices may not allow you to screen.
 - Screening results may not be reliable.
3. Make sure equipment is fully charged in order to complete screening.

Prior to **each** appointment:

1. Make sure equipment is fully charged in order to complete screenings.
2. Review training if necessary.
3. Check that calibration is up to date.
4. Complete biologic equipment checks. This can be completed by running an OAE or Tympanometry on yourself.

Automated Auditory Brainstem Response (AABR) Screening

Age Range: Birth to 6 months

For infants 0-6 months it is recommended that every attempt be made to use AABR, especially if the child has not passed a previous AABR. This technology is recognized as the gold standard for infant hearing screening as it assesses the entire hearing pathway to the brainstem. If AABR technology is not available, OAE is an acceptable alternative.

Description: The AABR screens by recording the brainstem's response to soft sounds presented simultaneously or sequentially through ear couplers/probes. Sensors pick up the brain's response to these sounds and send the information to the device for analysis. The baby needs to be asleep and in a quiet environment for best results.

Procedures:

1. Give sleep instructions to the parent before the appointment (cf. Appendix H).
 - a. The appointment may have to be rescheduled if child does not go to sleep.
 2. Ensure that the environment is quiet and child is asleep.
 3. Prior to screening, if your equipment has a "test mode" option, run equipment to make sure it is functioning correctly.
 4. Ensure good contact (low impedances) by preparing the infant's skin by removing lotions and oils. This can be done with water or a skin-prepping agent.
 5. At this point, some providers choose to connect the sensors to the device cables. Others prefer to wait until all sensors and ear couplers/probes have been placed on the baby.
 6. Place the small sensors on the infant's head, neck, and shoulder or cheek according to the manufacturer's recommendations.
 7. Some equipment uses a sound source that goes into the ear (probe) and others use devices that go over the ear (earphone/couplers).
 - a. For machines using a probe, insert directly into the ear and run the screening. Then move the probe to the other ear and repeat the screening.
 - b. For machines using earphone/ couplers, place over each ear.
 - i. Make sure you know if your device screens one ear at a time (sequential) or both at the same time (simultaneous).
 - ii. On most AABR machines, the earphone/couplers will be colored "red" for right and "blue" for left.
 8. Press the button to begin the AABR screening.
 - Always screen both ears even if the baby passed in one ear on initial screening.
 9. The display will read "Pass" or "Refer" when the screening is complete.
 10. Print/record results per your program's protocols.
- Tips for Optimal Screenings: Automated Auditory Brainstem Response (cf. Appendix I)

Otoacoustic Emissions (OAEs) Screening

Age Ranges: This test is suitable for any age.

Description: The OAE screens by generating soft sounds and measuring the response, or “emission,” that is generated by the outer hair cells of the inner ear (cochlea). Otoacoustic Emissions screening differs from the AABR in that it assesses the function of the cochlea but does not assess the integrity/synchrony of the auditory nerve.

Procedures:

1. If desired, give instructions to the parent before the appointment (cf. Appendix J).
 2. Conduct a biologic equipment check prior to starting a screening session. This can be completed by running an OAE on yourself.
 3. Ensure that the environment is quiet and child is very still. However, the child does not have to be asleep for this process.
 4. Perform visual inspection of the ear canal looking for excessive wax and drainage.
 - If drainage is noted, do not screen.
 5. Observe size and shape of the child’s ear canal.
 6. Select a probe tip that that will ensure a snug fit.
 7. Gently pull on the ear to open the ear canal and place probe in ear canal using a slight twisting motion.
 - It is NOT recommended to hold the probe in place as that increases the ambient noise level.
 - If the probe does not stay in place by itself, the tip size may be incorrect.
 8. Press the button to begin the OAE screening.
 9. The display will read “Pass” or “Refer” when the screening is complete.
 10. Repeat above procedures for the other ear.
 11. Print/record results per your program’s protocols.
- Tips for Optimal Screenings: Otoacoustic Emissions (cf. Appendix K)

Tympanometry Screening

AABR and OAE are objective whereas tympanometry requires some clinical judgment for interpretation. Programs may choose to offer a two-tiered protocol for children over 6 months of age; screening with OAE initially. Follow-up with tympanometry to determine middle ear status if a child Refers (Not Pass) on OAE, caregiver expresses concerns regarding a history of middle ear problems, or Pressure Equalization (PE) tubes are present.

Age Range: Recommended for ages 6 months+ depending on equipment

Suggested Personnel: Screeners with appropriate training as well as relevant clinical background. For example, speech-language pathologists and registered nurses.

Description: Tympanometry assesses the status of the middle ear system by varying air pressure from positive to negative in the ear canal. It should NOT be used as a first-stage screening tool as it is not a measure of hearing sensitivity.

Procedures:

1. Ensure that the child is not using a pacifier or eating during this screening process. Chewing and sucking can affect the outcomes of the screen.
 2. Conduct a biologic equipment check prior to starting a screening session. This can be completed by running a tympanogram on yourself.
 3. Perform visual inspection of the ear canal looking for excessive wax and drainage.
 - If the wax does not completely occlude the ear canal, a reliable tympanogram can be obtained.
 - If drainage is present, do not screen.
 - If patient has PE tubes, refer to your equipment manual for specific details.
 4. Observe size and shape of the child's ear canal.
 5. Select a probe tip that that will maintain a good seal.
 6. Gently pull on the ear to open the ear canal and place probe to obtain a seal.
 - The equipment will indicate whether a seal has been obtained and whether testing is proceeding.
 7. Screening will automatically begin once a good seal is established.
 8. Maintain the seal until the testing is completed.
 9. An image/graph will appear when the screening is complete.
 10. Print image/record /interpret results per your program's protocols.
- Tips for Optimal Screenings: Tympanometry (cf. Appendix L)

XI. Recording Hearing Screening Results

Following completion of the screening, results must be evaluated on a “Pass” or “Refer” basis. Hearing screening results should be recorded for each individual ear on the form required by your program (examples of forms are included in the Appendices B&C). It is recommended that written results be provided to parents.

Automated Auditory Brainstem Response & Otoacoustic Emissions

A “Pass” requires a pass in both ears during the same screening. However, a “Refer” in either ear indicates a child did not pass the overall screening and requires further follow-up.

LEFT	RIGHT	OVERALL
Pass	Pass	Pass
Refer	Refer	Refer
Refer	Pass	Refer
Pass	Refer	Refer

Tympanometry:

Components of Tympanometry and normative values for interpretation:

The **Ear Canal Volume (ECV)** is the amount of air measured in the space between the probe tip and tympanic membrane/eardrum. If the child has tubes or a perforation, the ECV will be large. Small ECV values may indicate that the probe is against the wall of the ear canal, or it could mean the ear is occluded with wax.

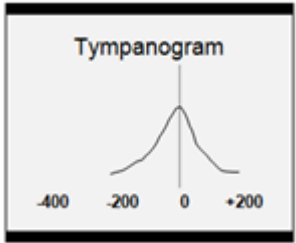
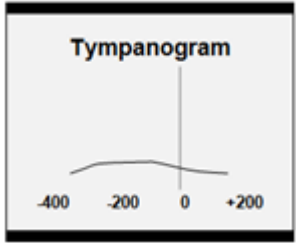
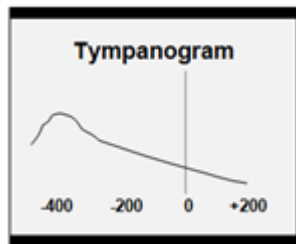
The height of the **Admittance Peak** is an indicator of the compliance and mobility of the tympanic membrane/eardrum and the ossicular chain. If the child has fluid and limited mobility of the middle ear system, there may be no peak and reflected as **NP** on tympanometry screening equipment.

The **Pressure Peak** is an indicator of the pressure in the middle ear space.

Results of this test are recorded as a series of numbers or displayed graphically as a tympanogram.

Normative Values				
Ear Canal Volume	Admittance Peak	Pressure Peak	Gradient	OVERALL
0.2 - 1.8 mmho	0.3 - 1.8 mmho	-190 - +100 daPa	≤200 daPa	Pass
≤ 0.2 mmho OR >1.8mmho and no history of tubes	<.3mmho	NP	NP	Refer

Graphic examples of tympanograms are found below.

Type	Description	Explanation	Example
A	Normal	Graph indicates normal movement of the tympanic membrane (ear drum)	
B	Flat	Graph indicates abnormal movement of the tympanic membrane (ear drum) suggesting middle ear fluid	
C	Negative Pressure	Graph indicates abnormal movement of the tympanic membrane (ear drum) suggesting Eustachian Tube Dysfunction	

XII. Relaying Hearing Screening Results

A hearing screening is not a diagnostic test. A child who does not pass needs to be referred on for additional testing. Even if the child passes the screening, it is recommended that the family be referred to a pediatric audiologist if concerns continue regarding hearing and/or communication. (cf. Appendices M-O).

XIII. Reporting Hearing Screening Results

Oklahoma Law (§ 63-1-543-545) (cf. Appendix P) requires that hearing results be sent to the Newborn Hearing Screening Program for screenings on children up to the age of 3. The state of Oklahoma uses this data to send state statistics to the Centers for Disease Control and Prevention (CDC). Providers can use the Newborn Hearing Screening Reporting Form (cf. Appendix B) or their clinic reports. Results can be sent via mail or fax to the following:

Oklahoma Newborn Hearing Program
 1000 NE 10th Street, Room 709
 Oklahoma City, OK 73117
 Fax: 405-271-4892

XIV. Referral Criteria

The following referral criteria can be utilized for children who did not pass Universal Newborn Hearing Screening that have received a follow-up screen at your clinic.

OAE/AABR	Tympanometry	Recommendations
≤ 6 Months		
Pass	Do not Test	Follow-up screening as needed
Refer	Do not Test	IMMEDIATE referral to PCP & pediatric audiologist for diagnostic assessment
> 6 Months		
Refer	Refer	IMMEDIATE referral to PCP & pediatric audiologist for diagnostic assessment
Refer	Pass	IMMEDIATE referral to PCP & pediatric audiologist for diagnostic assessment
Pass	Refer	IMMEDIATE referral to PCP with follow-up rescreen per your program's guidelines
Pass	Pass	Follow-up screening as needed

NOTE: The timing and number of hearing re-evaluations for children who passed Universal Newborn Hearing Screening but have one or more risk factors should be customized and individualized depending on the relative likelihood of a subsequent delayed-onset, or progressive Hearing Loss. Infants who pass the neonatal screening but have a risk factor should have at least 1 diagnostic audiology assessment by 24 to 30 months of age. (cf. Appendices D & E).

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Appendix List

The Oklahoma Newborn Hearing Screening Program and the Oklahoma Pediatric Audiology Program in collaboration with the Oklahoma Audiology Taskforce (OKAT) gathered the following resources to assist with utilizing the Oklahoma Hearing Screening Protocols – Ages Birth to 3 Years.

Appendix A: Infection Control and Universal Precautions

Appendix B: Newborn Hearing Screening Report Form

Appendix C: Middle-Ear/Hearing Screening Form

Appendix D: Risk Factors associated with permanent congenital, delayed-onset, or progressive Hearing Loss in childhood

Appendix E: Genetics – Syndromes Associated with Hearing Loss

Appendix F: Audiology Services Referral Form

Appendix G: Tips For Optimal Screenings - Get to Know Your Equipment

Appendix H: Pre-Appointment Letter - Auditory Brainstem Response (AABR) Screening

Appendix I: Tips For Optimal Screenings – Auditory Brainstem Response (AABR)

Appendix J: Pre-Appointment Letter – Otoacoustic Emissions (OAE) Screening

Appendix K: Tips For Optimal Screenings – Otoacoustic Emissions (OAE)

Appendix L: Tips For Optimal Screenings – Tympanometry

Appendix M: Parent Letters – Caregiver Notification of Hearing Screening

Appendix N: Parent Letters – Passed Hearing Screening

Appendix O: Parent Letters – Referral for Further Hearing Testing

Appendix P: Newborn Infant Hearing Screening Act – State of Oklahoma

Note: Parent letters were created as a template. These letters can be modified to meet the needs of your program. An electronic copy as a Word Document can be obtained by emailing newbornscreen@health.ok.gov

Appendix A: Infection Control and Universal Precautions

When screening hearing, precautions should be taken in controlling contaminants in the hearing screening/environment.

1. Contaminant Exposure

Exposure to contaminants may occur when:

- Performing a visual inspection;
- Handling and placing earphones on ears;
- Handling and placing OAE/tympanometry probe tips in ears;
- Testing children with suspected head lice or scalp infections; or
- Handling toys used for play audiometry and touching work surfaces; or
- Handling hearing aids, ear molds, and/or other hearing devices (i.e. cochlear implant /bone conduction processors)

2. Controlling Contaminant Exposure

The following are three levels of contaminant control:

- *Cleaning* – gross removal of germs, but germs are not killed.
- *Disinfection* – germs are killed.
- *Sterilization* – 100% of germs are killed through heat and pressure or chemically. An autoclave is preferred, but may not be appropriate if materials may melt.
 - *Note:* This type of contaminant control typically occurs in a clinic setting.

3. Disinfecting Probe Tips (Tympanometry/Otoacoustic Emissions) and Non-Disposable Otoscope Specula

- Use disinfectant wipes, one wipe per use, or
- Soak in disinfectant solution, or
- Use an ultrasonic cleaner with disinfectant solution

4. Disinfecting Ear Phones

- Use disinfectant wipes, one wipe per use
- Avoid getting moisture in the earphone diaphragm
- Rubbing alcohol is not recommended

5. Best Practices for Contaminant Control

In order to protect the technician, as well as to avoid cross contamination between children, The following procedures are recommended:

- Remove jewelry, such as rings, to eliminate contamination by microorganisms that may be underneath
- Wash hands before and after screening each child
 - Use a medical-grade antibacterial soap (bar soap is not recommended)
 - Thoroughly rinse with water
 - Dry hands by blotting, as rubbing will cause chaffing
 - Turn off water using a paper towel in order to avoid re-contaminating hands
- An antibacterial hand gel or wipe may be used to supplement hand washing

Appendix B: Newborn Hearing Screening Reporting Form

Newborn Hearing Follow-up Report submission is mandated by the State of Oklahoma, Newborn Infant Hearing Screening Act§63-1-543.

PURPOSE:

This Reporting Form is to be used to report all visits to your facility by infants and children birth to three years of age. Information from these reports will be used to update the newborn hearing screening results reported at birth by the hospital and monitor that each child is receiving follow-up services as soon as possible. Annual data will be reported to the Center for Disease Control and Prevention (CDC) to determine babies “Loss to Follow-up/Loss to Documentation”.

+++Please return or fax the completed form, or audiology report to: Newborn Hearing Screening Program, Oklahoma State Department of Health, 1000 N.E. 10th Street, Oklahoma City, OK 73117; Fax (405)271-4892

REPORTING HEARING RESULTS ON ALL INFANTS AND CHILDREN FROM YOUR FACILITY should include:

- Initial infant hearing screenings on “out of hospital births” and missed hospital screenings
- All infants that referred the initial hearing screening
- A child referred to you from other resources (parents, physicians) with suspected or confirmed hearing loss
- A child being evaluated for hearing aids or cochlear implant(s)
- A child being monitored for risk factors for progressive hearing loss
- A child who exhibits any significant change in hearing status
- A child who was scheduled for follow-up from newborn screening or hearing aid fitting but missed multiple scheduled appointments and has now been lost to follow-up
- **Report all results even if auditory responses are within the normal limits or incomplete results**

INSTRUCTIONS FOR USE:

- Enter date of appointment, not the date you are filling out form

IDENTIFYING INFORMATION

- The child’s full name, birth date, and mother’s first and last name
- Current address
- Name of child’s hospital of birth or note if out-of-hospital birth

RESULTS:

- Complete Box 1 for screenings, complete Box 2 for diagnostic audiologic assessments
- Check correct test results for each ear. Ear specific test results are required, even if baby passed one ear on an initial screen. If baby has malformation of ear prohibiting a screening, need to refer for diagnostic ABR.
- Check all tests performed.
- If baby Refers screening, make note of recommendations for follow-up in comments section of Box 1.
- If diagnosed hearing loss, check degree and type of loss (refer to updated ASHA guidelines for degree of loss)
- Do not mark two degrees of hearing loss. If the hearing loss crosses two levels, check the degree that encompasses the majority of the frequencies
- Include date of amplification and check type of amplification device
- Check all other referrals made
- If enrolled or referred to early intervention, note location if known
- Note any known risk factors/family history

Hearing Results
Newborn Screening Program
Oklahoma State Department of Health
1000 NE 10th Street
Oklahoma City, OK 73117-1299
405-271-6617

Dear Clinician: If the infant's parent/guardian did not bring a similar form that includes the infant's identifying information, use this form to report hearing screening or audiologic diagnostic results to the newborn screening program. Please return the completed form to the address above or FAX it to 405-271-4892.

Infant's last name: Infant's first name: DOB:
Mom's last name: Mom's first name: Mom's SS#:
Address: City: State: Zip:

Birth Facility: Primary Care Physician (PCP) Name :

To the clinician evaluating hearing: **Complete Box 1 if you are screening hearing; complete Box 2 if you are providing a diagnostic audiologic assessment.**

Box 1: Hearing Screening Results

Screening Date:

Results:

Right Ear: ☐ Pass ☐ Refer Left Ear: ☐ Pass ☐ Refer Screen Method: ☐ ABR ☐ OAE ☐ other _____

Early Intervention: ☐ Referred ☐ Already enrolled Location: _____

Comments:

Person screening: _____ Title: _____ Phone: _____

Box 2: Diagnostic Audiologic Assessment Results

Assessment Date: Seen previously? ☐ Yes ☐ No If Yes, Date:

Results:

Right Ear: ☐ Normal ☐ Slight Loss ☐ Mild Loss ☐ Moderate Loss ☐ Severe Loss ☐ Profound Loss ☐ Inconclusive
☐ Sensorineural ☐ Conductive ☐ Mixed ☐ ANSD ☐ Undetermined

Left Ear: ☐ Normal ☐ Slight Loss ☐ Mild Loss ☐ Moderate Loss ☐ Severe Loss ☐ Profound Loss ☐ Inconclusive
☐ Sensorineural ☐ Conductive ☐ Mixed ☐ ANSD ☐ Undetermined

Assessments used: (Check all that apply) ☐ ABR ☐ Bone ABR ☐ ASSR ☐ TEOAE ☐ DPOAE ☐ BOA ☐ VRA
☐ Pure Tone ☐ Tympanometry ☐ other _____

Early Intervention: ☐ Referred ☐ Already enrolled Location: _____

Amplification: Date _____ Type: ☐ Hearing Aid ☐ Cochlear Implant ☐ other _____

Referrals/Resources: ☐ PCP ☐ ENT ☐ Genetics ☐ Ophthalmology ☐ other _____

Risk Factors/Family History: _____

Recommendations/Comments:

Audiologist: _____ Phone: _____

PEDIATRIC MIDDLE-EAR/HEARING SCREENING FORM

NAME _____ SEX _____ BIRTHDATE _____ DATE _____

MOTHER'S NAME _____

SCREENER _____ TITLE _____ COUNTY _____

INSTRUCTIONS FOR MIDDLE-EAR SCREENING: For each ear, draw the tympanogram and record the type, canal volume, admittance peak, and pressure peak in the appropriate boxes according to screening results. See flowchart on reverse of this page.**RIGHT EAR**

Draw Tympanogram			
-400	-200	0	+200

Type

Canal Volume

Admittance Peak

Pressure Peak

Otoscopy? Yes No

LEFT EAR

Draw Tympanogram			
-400	-200	0	+200

INSTRUCTIONS FOR PURE TONE SCREENING: Present a 20dB HL signal at each screening frequency. Not responding to the 20 dB tone at any frequency in either ear shall constitute a does not pass. Record a "+" (plus) for "pass" or "-" (minus) for "does not pass" in the appropriate boxes.

RIGHT	1000 Hz	2000 Hz	4000 Hz
-------	---------	---------	---------

LEFT	1000 Hz	2000 Hz	4000 Hz
------	---------	---------	---------

INSTRUCTIONS FOR PHYSIOLOGIC SCREENING: Refer to the specific OSDH protocol for the technology used. Check the type(s) of physiologic screening employed. Indicate screening results for each ear. Record a "+" (plus) for "pass" or "-" (minus) for "does not pass" in the appropriate box.

Type of screening: ABR ☐ RIGHT EAR ☐ LEFT EAR ☐

OAE ☐ RIGHT EAR ☐ LEFT EAR ☐

SCREENING RESULTS: Pass ☐ Does Not Pass ☐

RECOMMENDATIONS: Audiologic Referral ☐ PCP Referral ☐

Re-Check in 4-6 Weeks ☐ Other (specify) ☐

Pass newborn Hearing Screening? Y N Risk Factors: _____

History of ear infections? Y N _____

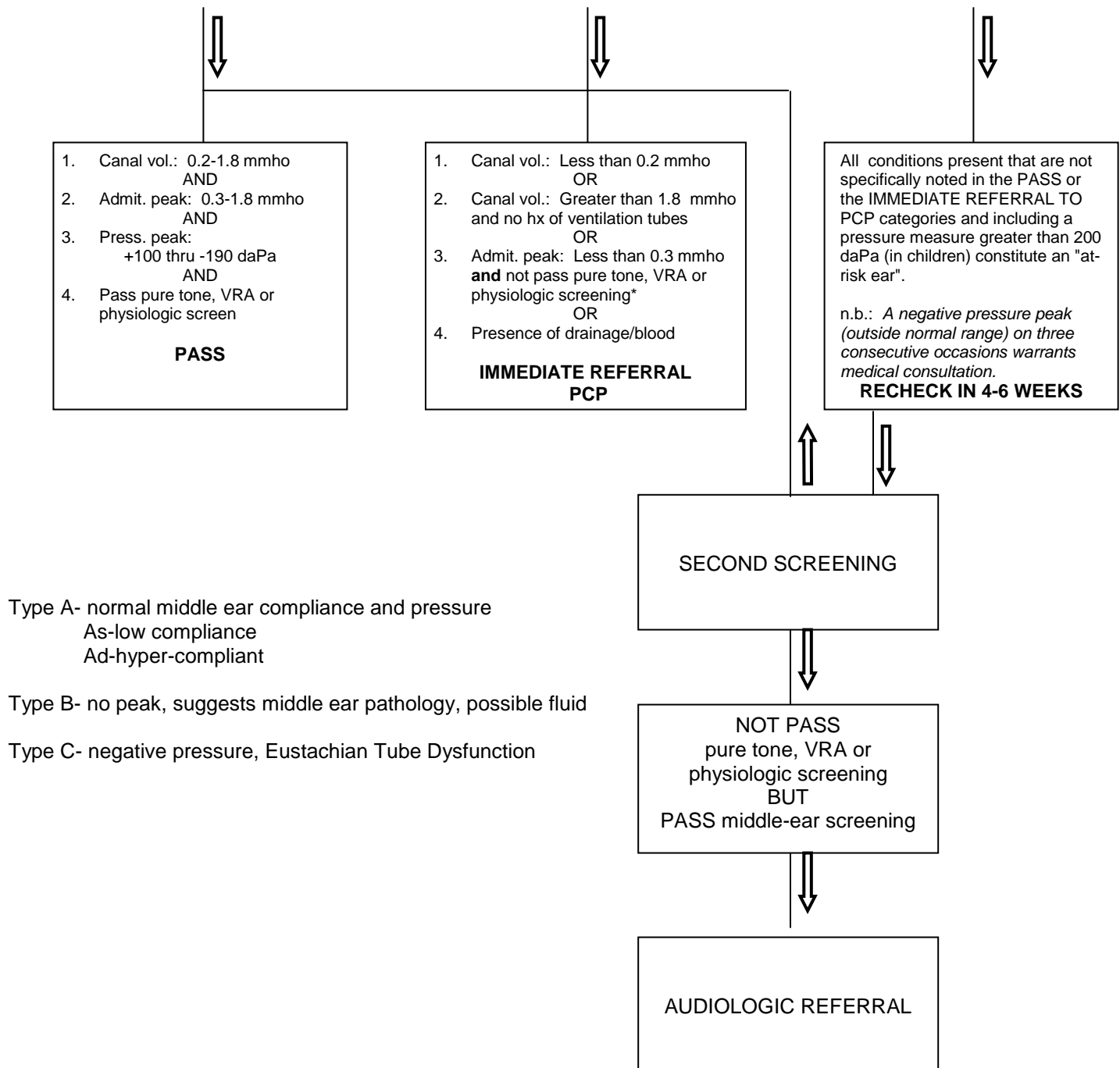
P.E. Tubes? Y N If Yes, When? _____

COMMENTS : _____

MIDDLE-EAR / HEARING SCREENING PROTOCOL

WITHOUT OTOSCOPIC EXAMINATION

(PHNs and PNPs should refer to Practice Guidelines/Approved Orders: Middle Ear Dysfunction)



*NOTE: IF THE CHILD IS TOO YOUNG TO TEST USING PURE TONE SCREENING AND VRA OR PHYSIOLOGIC SCREENING IS NOT AVAILABLE, THE COMBINATION OF AN ADMITTANCE PEAK OF LESS THAN 0.3 MMHO AND A HISTORY OF MIDDLE EAR EPISODES IN THE LAST SIX MONTHS IS A BASIS FOR AN IMMEDIATE REFERRAL TO A PNP OR A PHYSICIAN.

Appendix D: Risk Factors associated with permanent congenital, delayed-onset, or progressive Hearing Loss in childhood

(JCIH Position Statement, 2007)

*Risk indicators marked with a * are of greater concern for delayed-onset hearing loss*

1. Caregiver concerns* regarding hearing, speech, language, or developmental delay
2. Family history* of permanent childhood hearing loss
3. Neonatal intensive care of more than 5 days or any of the following regardless of length of stay: ECMO,* assisted ventilation, exposure to ototoxic medications (i.e. gentamicin, vancomycin, and tobramycin) or loop diuretics (Furosemide/Lasix), and hyperbilirubinemia that requires exchange transfusion
4. In utero infections, such as CMV,* herpes, rubella, syphilis, and toxoplasmosis
5. Craniofacial anomalies, including those that involve the pinna, ear canal, ear tags, ear pits, and temporal bone anomalies
6. Physical findings, such as a white forelock, that are associated with a syndrome known to include a sensorineural or permanent conductive hearing loss
7. Syndromes associated with hearing loss or progressive or late-onset hearing loss, *such as neurofibromatosis, osteopetrosis, and Usher syndrome; other frequently identified syndromes include Waardenburg, Alport, Pendred, and Jervell and Lange-Nielson
8. Neurodegenerative disorders * such as Hunter syndrome, or sensory motor neuropathies, such as Friedreich ataxia and Charcot-Marie-Tooth Syndrome
9. Culture-positive postnatal infections associated with sensorineural hearing loss,* including confirmed bacterial and viral (especially herpes viruses and varicella) meningitis.
10. Head trauma, especially basal skull/temporal bone fracture* that requires hospitalization

Appendix E: Genetics

Syndromes Associated with Hearing Loss

Currently, over 400 syndromes have been identified in connection with hearing loss. Below is a list of some syndromes associated with hearing loss. To check the association of hearing loss with certain birth conditions, visit the Hereditary Hearing Loss website at the following location:

<http://hereditaryhearingloss.org>

Apert Syndrome:

- Conductive hearing loss due to craniofacial abnormalities
- Hearing loss is typically bilateral

Branchio-Oto-Renal Syndrome:

- Can present with sensorineural, conductive, or mixed hearing loss
- Can present with preauricular pits, ear malformations
- Renal anomalies

CHARGE Syndrome:

- Presents as sensorineural, conductive, or mixed hearing loss
- Ear abnormalities such as atresia/microtia, middle ear malformations, cochlear hearing loss, and/or small or absent auditory nerves are not uncommon findings
- Many children with CHARGE do not have semi-circular canals
- Degree of hearing loss ranges from mild to profound hearing loss

Cornelia de Lange Syndrome:

- Conductive hearing loss secondary to cleft palate
- 50% of patients with CdLS have mild to moderate hearing conductive hearing loss

Crouzon Syndrome:

- 1/3 – 1/2 of patients diagnosed have hearing loss
- Presents as nonprogressive, conductive hearing loss
- Atresia, middle ear deformities

Down Syndrome:

- 34-78% of patients with Down Syndrome have hearing loss
- May be conductive due to higher incidence of middle ear effusion and/or anatomical anomalies of ear canals (stenosis) or Eustachian tubes.
- Conductive hearing loss may resolve with treatment/age as structures mature
- Prevalence of hearing loss is higher than general population.

Goldenhar (Oculo-auriculo-vertebral) Syndrome:

- Outer ear deformities including atresia, anotia, and microtia
- Ear Tags/pre-auricular pits
- Conductive Hearing Loss

Hunter Syndrome:

- Hearing loss may appear around 3 years of age; not typically severe
- Can present as sensorineural, conductive, or mixed hearing loss
- Reduced vestibular function
- One of the Mucopolysaccharidoses (a series of 6-10 syndromes that cause rare, metabolic, hereditary diseases linked to connective tissue deformities).

Hurler Syndrome:

- Mild to moderate sensorineural hearing loss
- Potential conductive hearing loss
- Increased risk for otitis media and upper respiratory infection
- One of the Mucopolysaccharidoses (a series of 6-10 syndromes that cause rare, metabolic, hereditary diseases linked to connective tissue deformities).

Klinefelter Syndrome:

- Hearing loss is rare (approximately 20% of patients with Klinefelter Syndrome)
- Of those with hearing loss, presents as a progressive hearing loss

Maroteaux-Lamy Syndrome:

- Conductive hearing loss due to chronic otitis media possible

Moebius Syndrome:

- Weakness or paralysis of facial muscles
- Facial abnormalities
- Hypotonia
- Potential hearing loss

Morquio Syndrome:

- Chronic/recurrent otitis media in 80% of cases
- Middle ear pathologies
- Mixed or sensorineural hearing loss typically develops by 10 years of age

Noonan Syndrome:

- Can present as sensorineural hearing loss, conductive hearing loss, or mixed hearing loss
- Linked with clefting aspects
- Structural deficits in ear formation
- Affects internal structural development

Pendred Syndrome

- Usually sensorineural hearing loss but can present as conductive or mixed hearing loss
- Vestibular or balance difficulties are common.
- Commonly associated with Enlarged Vestibular Aqueduct diagnosed with imaging
- Can affect the thyroid gland (hypothyroidism or goiter is common)
- 5%-10% of hereditary hearing loss

Pierre-Robin Sequence:

- Deformities of pinna
- Low set ears
- External ear canal abnormalities
- Structural deficits of ossicles
- Hearing loss more common in Pierre Robin than in children with isolated cleft

Scheie Syndrome:

- Hearing loss may be associated, typically sensorineural.
- One of the Mucopolysaccharidoses (a series of 6-10 syndromes that cause rare, metabolic, hereditary diseases linked to connective tissue deformities).

Stickler Syndrome:

- Strongly associated with hearing loss
- Low set pinnae/ears
- 10%-12% of cases present with auricular malformations
- Bilateral conductive hearing loss mild to severe
- In 15-20% of cases, high frequency sensorineural hearing loss occurs
- Deafness in extreme cases

Treacher Collins Syndrome:

- Severe craniofacial anomalies
- Bilateral conductive hearing loss
- 85% have pinna malformations including atresia, pits, and tags
- External auditory canal is typically closed off or stenotic

Usher Syndrome:

- Sensorineural Hearing Loss (Types I & II associated with congenital hearing loss; Type III is often progressive, later onset)
- Varying degrees of vestibular impairment
- Retinitis pigmentosa resulting in progressive vision loss

Waardenburg Syndrome

- Sensorineural hearing loss: unilateral or bilateral
- White forelock, different colored eyes, partial albinism
- Fused eyebrows, widely-spaced eyes, high nasal bridge, under-developed nose tip.

Syndrome References

Raut, P., Sriram, B., Yeoh, A., Hee, K.Y., Lim, S.B., & Daniel, M.L. (2011). High prevalence of hearing loss in Down syndrome in first year of life. *Annals of the Academy of Medicine Singapore*, 40 (11), 493-498.

Richard, G. J., & Hoge, D. R. (2000). *The Source for Syndromes 2*. LinguiSystems.

Kwong, K., & Wong, V. (1996). Neurodevelopmental profile of Down syndrome in Chinese children. *Journal of Pediatrics and Child Health*, 32(2), 153-157.

Syndromic Hearing Loss (n.d.) retrieved January 27, 2019, from <https://www.babyhearing.org/syndromic-genetic>

Audiology Services Referral Form

CHILD'S NAME: _____ DOB: _____

HOME ADDRESS: _____

PARENT/CAREGIVER NAME: _____ LANGUAGE _____

HOME PHONE: _____ CELL: _____ WORK: _____

INSURANCE COMPANY: _____ INSURANCE #: _____

SECONDARY INSURANCE: _____ INSURANCE #: _____

PRIMARY CARE PHYSICIAN: _____ PHONE: _____

RESOURCE COORDINATOR (if applicable): _____ PHONE: _____

PRESENTING CONCERNS/REASON FOR REFERRAL: _____

REFERRED TO: _____ FAX: _____

REFERRING SITE

FACILITY: _____ PHONE: _____

ADDRESS: _____ FAX: _____

CLINICIAN: _____ SPECIALTY: _____

DATE OF REFERRAL: _____ COUNTY: _____

PLEASE PROVIDE RESULTS TO THE REFERRING FACILITY/CLINICIAN

ADDITIONAL HEARING OR MEDICAL INFORMATION ATTACHED: YES or NO (CIRCLE ONE)

IF UNABLE TO SCHEDULE AN APPOINTMENT WITH THE PATIENT,
PLEASE CONTACT THE REFERRING FACILITY AT YOUR SOONEST CONVENIENCE.

Appendix G: Tips For Optimal Screenings

Get to Know Your Equipment

1. Calibration

- Equipment must be calibrated annually
- Check with program administrator as to the process for calibration
- Some devices have pop-up reminders
- Biologic equipment calibration (i.e. listening checks) should be completed at regular intervals. This can be completed by running an OAE or Tympanometry on yourself. Refer to your AABR equipment manual to determine how to check your equipment prior to screening.

2. Screening Unit

- Care for it as you would your computer
- Know how to turn it on
- Know what displays you see when you conduct screening and what do they mean
- Understand error messages that you might see while screening

3. Power supply/adaptor cord

- How long does it take to charge unit?
- How long does the battery hold the charge?
- Can you screen with unit plugged in or not (most of them you cannot)?

4. Probe/earphone assembly (OAE and AABR)

- Very expensive part of the unit
- Never bend cords or sharply crimp the cords
- Whenever possible, leave probes attached
- Earphones (AABR) -understand the color coding for right and left ears

Appendix H: Parent Letter

Pre-Appointment Letter: AABR Screening

Name: _____

Location: _____

Appointment Date: _____

Time of Screening: _____

Your baby has been scheduled for an Automated Auditory Brainstem Response (AABR) hearing screening. This allows the screener to check how well sounds travel through the ear to the brain. Small electrodes, or gel tabs, are placed on the head, neck, and cheek/shoulder. Screening is performed by presenting "clicking" sounds through earphones

This screening is safe and painless for your baby. In order to measure the tiny response to sound; however, your baby must be asleep.

It is important to follow these instructions:

- Come to the appointment with your baby tired and hungry
 - Wake him/her up earlier the day of the screening
 - Try and keep your baby awake in the car- bring someone to help in the car if you can
- If your baby's feeding is close to the appointment time, please do NOT feed your child until you arrive at the appointment.
 - A full stomach will help your child sleep for the procedure. You can nurse/feed your baby in the room right before the test.
- Please bring a:
 - Bottle for your baby or you can nurse in our quiet room
 - Special blanket or toy that will make your baby more comfortable
 - Pacifier if needed

If your baby does not sleep, the appointment would have to be rescheduled.

If you have any questions, please do not hesitate to call.

Thank you!

Your appointment is scheduled for: **XX/XX/XXXX at X:XX a.m./p.m.**

Sincerely,

XXXXXX

Appendix I: Tips For Optimal Screenings

Automated Auditory Brainstem Response (AABR)

+++If the AABR is taking more than 12-15 minutes to complete, stop screening and troubleshoot

1. **Impedances** (good contact between skin and sensor)
 - a. The equipment will indicate which sensor is the problem.
 - i. If the impedance of all 3 sensors are high, begin by adjusting the common sensor first (which is typically placed on the shoulder or the cheek).
 - ii. If this does not resolve the issue, adjust the other sensors or check the equipment as it could have a broken lead.
 - b. Make sure the baby's skin is clean and dry at the sensor site.
 - i. Instruct parents prior to appointment to not use lotions/oils on skin on day of appointment.
 - ii. The sensors are pre-gelled so little preparation is needed but more preparation prior to starting the screening may save you time later in the screening session
 - iii. It may be necessary to use saline or a scrub (i.e. NuPrep)
 1. Place small amount of scrub on a piece of gauze or curette
 - a. Scrub skin gently
 - b. Wipe off scrub with gauze
 - c. May use alcohol but it may dry the site out keeping the sensors from sticking
2. **Myogenic/internal noise**- high myogenic noise may mean excessive activity or tension in the muscle, or a high level of "internal noise," which is very common in pre-term infants due to delayed neurological maturation.
 - a. Screen the baby in a sleep state or at a minimum, a relaxed state.
 - b. If possible, screen after a baby has been fed, and is swaddled.
 - c. Prepare the baby for testing while caregiver is feeding
 - d. Attempt screening with pacifier if necessary but if a source of "noise" , remove it
 - e. Try re-positioning the baby
 - i. If cradled, pressure from caregiver's arm on the nape sensor may cause high noise errors
 - ii. If laying on caregiver's chest, neck tension may also be a source of high noise errors
 - iii. The caregiver's tension may also be picked up by the equipment
3. **Electrical Noise** – Noise from other equipment in or outside the building can interfere with testing
 - a. Turn off all cellphones in the test room
 - b. Move equipment away from any electrical devices that could be a source of radio frequency (RF) interference.

Appendix J: Parent Letter

Pre-Appointment Letter: OAE Screening

(Date)

(Address)

(City, State, and Zip)

Dear Parent/Guardian:

Your baby/child has been scheduled for an Otoacoustic Emissions (OAE) hearing screening. During an OAE screening, a small probe is placed in your baby/ child's ear. The probe makes a series of soft tones and then records the inner ear's response to these sounds. This process is quick, simple, and painless. The screening does require your baby/child be still/relaxed.

If your child is an infant, please follow the instructions below:

- Come to the appointment with a tired and hungry baby
- Try and keep baby awake in the car
- If your baby feeds around the appointment time, wait until you get to our facility
- Please bring:
 - Bottle for your baby or you can nurse in the room
 - Pacifier if needed
 - Special blanket or toy that will make your baby more comfortable.

If your child is a toddler/older:

- You will hold your child on your lap
- You and/or the clinician will have visual distractors (lighted toys, phones/videos) to assist in quickly completing the screening

Your appointment is scheduled for:

XX/XX/XXXX at X:XX a.m./ p.m.

Sincerely,

XXXXXX

Appendix K: Tips For Optimal Screenings

Otoacoustic Emissions (OAE)

1. Noise – error message on your equipment may read “Noisy” or “Abort”

- a. Minimize outside noise sources i.e. television by deactivating or removing any device that is a potential source of noise.
- b. Ask persons in or near the area to refrain from talking or other activity.
- c. Child does not have to be asleep but needs to be comfortable
 - i. Swaddle infants or have parent hold child comfortably on lap
 - ii. Distract children with highly visual, quiet toys e.g. light-up toys, cell phone apps or videos that children can watch with the sound turned off.
 - iii. Tell older children to “play the quiet game” and be “still as a statue and quiet as a mouse”

2. Probe fit- error message on your equipment may read “Fit Err/Error” or “No Seal”

- a. May need to choose a bigger tip
 - i. A rule of thumb is to pick a size bigger than you might expect when visualizing the size of the ear canal opening
 - ii. If the probe tip slides in easily, the tip is too small
 - iii. Should not have to hold the tip to make it fit
 - iv. Gently pull back the ear to open up the ear canal, placing tip in ear canal with a twisting motion
 - v. Try, try again

3. Probe status

- a. Examine the ear canal and probe for obstruction prior to testing.
- b. Refer to the User’s manual for cleaning recommendations.
 - i. Clean the probe at least once/day or more as needed.
- c. Replace the probe tip before each test
 - i. Follow manufacturer’s recommendations for discarding or cleaning of probe tips.

Appendix L: Tips For Optimal Screenings

Tympanometry

1. **Probe fit-** Most tympanometers will automatically begin screening once a seal is obtained with the tip
 - a. Many machines have signals to alert screener if a seal has been obtained
 - i. May need to choose a bigger tip.
 - ii. Use a twisting motion to rotate the probe back and forth to fit into the ear canal
 - b. Some tips simply just fit up against the ear canal opening and do not completely go in the ear canal
2. **Probe/tip status**
 - a. Examine the ear canal and probe for obstruction prior to testing.
 - b. Refer to the manual for cleaning recommendations.
 - c. Replace the tip before each test and follow manufacturer's recommendations for discarding or cleaning of tips

Appendix M: Parent Letter

Caregiver Notification of Hearing Screening

(Date)

(Address)

(City, State, and Zip)

Dear Parent/Guardian:

Hearing screenings will be available to your child on (DATE/TIME) at (LOCATION).

Hearing loss can have a significant impact on your child's speech and language development, social emotional growth, and academic success.

If your child will not participate in this screening, please fill out the bottom of this letter and return to us as soon as possible.

If you have concerns or questions, please contact us. Our telephone number is (phone number).

Sincerely,

XXXXXX

Date: _____

Name: _____

____ We request that our child **not** participate in the hearing screenings

Signature of Parent/Guardian: _____

Appendix N: Parent Letter

Passed Hearing Screening

(Date)

(Address)

(City, State, Zip)

Dear Parent/Guardian:

Recently, your baby/child's hearing was screened and your child passed both ears.

No further steps are needed at this time; however, it is important to remember, that this is only a screening; and does not necessarily mean that your child is not experiencing any hearing difficulties. If at any time you have concerns about your child's hearing and/or speech and language development, contact your primary care physician for referral for further testing.

If you have questions regarding the hearing screening, please call us at (number)

Sincerely,

XXXXXX

Appendix O: Parent Letter

Referral for Further Hearing Testing

(Date)

(Address)

(City, State, Zip)

Dear Parent/Guardian:

This is to inform you that your child did not pass the recent hearing screening. We strongly recommend that your child receive a complete diagnostic hearing evaluation. Any hearing loss can have a significant impact on your child's speech and language development, social emotional growth, and academic success.

Please contact your primary care physician for a referral to a pediatric audiologist in your area. A pediatric audiologist is a certified and licensed health professional who specializes in the identification, assessment, and management of hearing loss in children.

A copy of the screening form is enclosed as well as a list of pediatric audiologists in the area.

If you have questions about the screening results or if you need further information about the recommended referral, please call (number).

Sincerely,

XXXXXXX

Enclosures

Appendix P: Newborn Infant Hearing Screening Act State of Oklahoma

Newborn Infant Hearing Screening Act

§63-1-543. Short title - Screening for detection of congenital or acquired hearing loss.

A. This act shall be known and may be cited as the “Newborn Infant Hearing Screening Act”.

B. Every infant born in this state shall be screened for the detection of congenital or acquired hearing loss prior to discharge from the facility where the infant was born. A physician, audiologist or other qualified person shall administer such screening procedure in accordance with accepted medical practices and in the manner prescribed by the State Board of Health. If an infant requires emergency transfer to another facility for neonatal care, such screening procedure shall be administered by the receiving facility prior to discharge of the infant.

C. The State Board of Health shall promulgate rules necessary to enact the provisions of this act. The State Commissioner of Health shall develop procedures and guidelines for screening for the detection of congenital or acquired hearing loss.

D. Any durable medical equipment purchased or supplied by the State Department of Health for the purpose of being permanently or temporarily fitted for use by a specific child shall not be deemed or considered to be a “tangible asset” as that term is defined in Section 110.1 of Title 74 of the Oklahoma Statutes and, once fitted to a specific child, shall be deemed thereafter to have minimal or no value to the Department for purposes of further disposition pursuant to the Oklahoma Central Purchasing Act.

[1]Added by Laws 1982, c. 141, § 1, emerg. eff. April 9, 1982. Amended by Laws 2000, c. 204, § 1, eff. Nov. 1, 2000; Laws 2006, c.273, § 1, emerg. eff. June 7, 2006.

§ 63-1-544. Report of results

The results of the screening procedures, conducted pursuant to section 1 of this act, shall be reported to the State Department of Health in accordance with procedures adopted by the State Board of Health.

[1]Added by Laws 1982, c. 141, § 2, emerg. eff. April 9, 1982.

§ 63-1-545. Publication of results--Release of information

The State Commissioner of Health shall compile and publish annually the results of the infant screening procedures using the information reported to the Department. The Commissioner may authorize the release of information concerning children who are found to have hearing impairments to the appropriate agencies and department so that such children may receive the necessary care and education.

[1]Added by Laws 1982, c. 141, § 3, emerg. eff. April 9, 1982.